

California HOV/Express Lane Business Transformation

January 2010

Progress Log/Report

General Project Information

Team Leader: Monica Kress, HQ Caltrans Traffic Operations (916) 651.9054

Recent Activity:

- Developed simplified Action Items for the Transformation Plan
- Gathered internal experts (Implementation Team) to participate in Transformation and internalize the philosophies/outcomes
- Met with Implementation Team in October, December, January to strategize on future efforts and disciplined project management
- Assigned Focus Team Leaders
- Focus Team Leaders gathered task teams, reference materials, further defined subtasks, and continued activity
- Developed updated Transformation summary materials, schedule materials, and periodic reporting materials
- Determined that the outcome of this Transformation will result in, not only a Transformed HOV/Express Lane Business in California, but also a specific Caltrans Plan for HOV/Express Lane project development and dynamic operations into the future.

Transformation Action Areas		Expected Schedule			
		2009	2010	2011	2012
FOCUS A: Support Performance-Based Decisions					
<i>Philosophy in general: enable more dynamic operations, enable bold decisions for high mobility payoff including dual managed lanes or conversions</i>					
A1	Improve Caltrans monitoring and evaluation process (Objective: reduce costs, increase data quality/quantity, utilize PeMS, homogenize monitoring and evaluation statewide, increase corridor analysis)	▶			
A2	Establish common performance measures for HOV and Express Lane operations (Outcome: Develop Caltrans annual report standard, establish requirements for Joint Operations project performance reporting)	▶			
A3	Conduct pilot projects and research projects (support technical guidance in FOCUS C)	▶			
A4	Based on results of learning, establish corrective expectations for low performance (for Planning, Joint Operations, and Caltrans Operations) (support technical guidance in FOCUS B and C)	⊖			
FOCUS B: Engage in Active Partnership					
<i>Philosophy in general: strive to create efficient operations where partner roles are win-win and largely consistent statewide</i>					
B1	Establish an ongoing communication forum to increase coordination, lessons learned, and eventual decision-making as needed	▶			
B2	Each partner determines and strives to apply needed resources to HOV/Express Lane development, operation, adjustment, enforcement, and outreach	⊖			
B3	Establish best-practices and Caltrans internal guidance on Joint Operations roles/responsibilities/philosophies	▶			
B4	Explore and utilize customer and political concerns	⊖			
B5	Share and adopt best message material to increase the government's compelling common voice	⊖			
FOCUS C: Update Technical Policies and Regulations					
<i>Philosophy in general: address current questions on dual-lane, access control, signage, toll collection; enable open-road tolling and simplified implementation of needed system adjustments</i>					
C1	Update Caltrans' High-Occupancy Vehicle Guidelines and other design/approval documentation	▶			
C2	Explore and clarify federal guidance and requirements for system changes	▶			
C3	Enable open-road tolling with technology and updated statutes/regulations (e.g. Title 21)	▶			
C4	Simplify the process of obtaining tolling authority	⊖			

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Focus A: Support Performance-based Decisions

- Improve HOV/Express Lane, system performance monitoring, evaluation and reporting system
- Improve decision-making knowledge with research and pilot projects

Outcome: Increase system performance by enabling more dynamic operations & bold decisions for high mobility payoff with changes such as increased carpool occupancy requirements, multi-lane facilities, lane conversions, and tolled Express Lanes.

KEY ISSUES:

- Increase data quality and quantity, utilize automation
- Collect, analyze and report the data in more homogenize and comprehensive ways
- Utilize data and analysis results from partners more efficiently
- Create atmosphere to confidently make effective decisions to increase occupancy, utilize multiple lanes, etc (what pilot projects are needed and what will we learn?)

Team Leader: Farid Nowshiravan, D12 Caltrans 949-756-7639

ACTION ITEM PROGRESS

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A1	Improve Caltrans monitoring and evaluation process (Objective: reduce costs, increase data quality/quantity, utilize PeMS, homogenize monitoring and evaluation statewide, increase corridor analysis)	▶						
A2	Establish common performance measures for HOV and Express Lane operations (Outcome: Develop Caltrans annual report standard, establish requirements for Joint Operations project performance reporting)	▶						
A3	Conduct pilot projects and research projects (support technical guidance in FOCUS C)	▶						
A4	Based on results of learning, establish corrective expectations for low performance (for Planning, Joint Operations, and Caltrans Operations) (support technical guidance in FOCUS B and C)	⊖						

Progress Legend: ⊖=None ▶=Begun ►=Significant Progress ✓=Done

RESOURCES:

- NCHRP Project 08-75 Performance Measurement and Evaluation of Tolling and congestion Pricing Project Benefits and System Impacts (Monica is on panel)
- NCHRP Project xx (Marco is on panel)
- <http://www.trb.org/TRBNet/ProjectDisplay.asp?ProjectID=2501>
- <http://www.trb.org/TRBNet/ProjectDisplay.asp?ProjectID=2490>

Action A1: Improve Caltrans monitoring and evaluation process (Objective: reduce costs, increase data quality/quantity, utilize PeMS, homogenize monitoring and evaluation statewide, increase corridor analysis)

ACTIVITY:

- Interact with responsible divisions/branches to ensure the necessary actions are implemented to ensure detection/communication systems are adequate and working at optimum level (On going)
 - Improve maintenance
 - improve coverage
 - Explore and utilize proven new technologies
- PEMS: Modify PeMS to include HOV specific analysis/comparisons (DONE, training remains)
- Homogenize system monitoring and evaluation statewide (On going, working with the HOV/HICOMP functional managers and focus group team members)
 - Identify, describe and establish guidelines to collect and process data
 - Increase corridor analysis (on going as part of the CSMP efforts.)
- Simulation Modeling Tools: Utilize Tools to test HOV/Express Lane Strategies and quantify its benefits (Ongoing as part of the CSMP efforts)

FUTURE TASK:

- PeMS: Ongoing discussion for further PeMS refinement to include additional HOV/Express lane analysis options
- Interact and communicate with responsible divisions/branches for utilizing better detection and communication systems
- Simulation Modeling Tools: Establish ongoing discussion and interaction with Software developers, Researchers and end users for further Modification and enhancement of simulation tools so it could be more reliable, cost effective and less time consuming for testing improvement strategies and quantifying their benefits.
- Provide workshops and training
- CORRIDOR ANALYSIS: Coordinate with HICOMP transition activity (similar evolution to integrate PEMS data). Continue working with responsible divisions and the CSMP team
- TBD

Action A2: Establish common performance measures for HOV and Express Lane operations (Outcome: Develop Caltrans annual report standard, establish requirements for Joint Operations project performance reporting)

ACTIVITY:

EXPLORATION: Marco Ruano and Monica Kress are participating on NCHRP projects related to performance measurement. John Wolf participating in SHRP2 project related to performance measurements. Steve Pyburn (FHWA) knowledgeable of TRB Committee working on performance measures. Division of Research and Innovation' (DRI) HOV research Project (RID #1665), Performance Measures for Analysis of Statewide HOV Operations

- Identify and describe the related performance measures (on going)
- CALTRANS ANNUAL REPORT: Work with Functional managers to standardize Annual Report: identify common measures, common methods, common format.
Set goal for fully coordinated Annual Report (2011)

FUTURE TASK:

- More regular and specific discussion with Steve Pyburn of FHWA
- Establish workshop and participate in related work shop
- Learn from TRB HOV/Managed Lanes Committee meeting breakout session "Congestion Mitigation, Throughput Measures"
- TBD

Action A3: Conduct pilot projects and research projects (support technical guidance in FOCUS C)

ACTIVITY:

- Orange County SR-22 non-traditional HOV striping (continuous access)
- Orange County SR-55 non-traditional HOV striping (continuous access)
- Bay Area: I680, I580,
- Los Angeles: I110/10
- 2009 UC Berkeley HOV Access Safety Study (complete)
- 2010 UCI and UCR HOV Access Performance Study (ongoing)
- Various modeling studies (ongoing)
- UCB Dynamic Signing Hybrid project (stalled due to contract issues)
- Los Angeles I-110N to I-5N Dynamic Shoulder signing/striping (open Jan2010)
- Corridor System Management Plan (CSMP) projects (ongoing)

FUTURE TASK:

- Learn from pilot implementations
- TBD

Action A4: Based on results of learning, establish corrective expectations for low performance (for Planning, Joint Operations, and Caltrans Operations) (support technical guidance in FOCUS B and C)

ACTIVITY:

- FHWA "Cross-Cutting Study on Managed Lanes", FHWA "Policy Options Evaluation Tool for Managed Lanes"
- TBD

FUTURE TASK:

- TBD
- TBD

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Focus B: Engage in Active Partnership

- Increase informal communication between partners
- Learn lessons and adopt best practices from initial interagency agreements
- Share and adopt best message material to increase the government's compelling common voice

Outcome: Potential new platform for partner interaction, partner authority/roles/responsibilities are win-win and largely consistent statewide. Consistent core message and language in outreach materials within Caltrans Traffic Operations Program initially, with partners ultimately. Public and political satisfaction.

KEY ISSUES:

- Define best structure for interagency cooperation (roles and revenue distribution)
 - Need to: pilot, share, learn, standardize
- Create active community to interact, learn, cooperate

Team Leader: Monica Kress, HQ Caltrans, 916-869-5739

ACTION ITEM PROGRESS

Transformation Action Areas		Expected Schedule						
		2009	2010		2011		2012	
B1	Establish an ongoing communication forum to increase coordination, lessons learned, and eventual decision-making as needed	▶						
B2	Each partner determines and strives to apply needed resources to HOV/Express Lane development, operation, adjustment, enforcement, and outreach	⊖						
B3	Establish best-practices and Caltrans internal guidance on Joint Operations roles/responsibilities/philosophies	▶						
B4	Explore and utilize customer and political concerns	⊖						
B5	Share and adopt best message material to increase the government's compelling common voice	⊖						

Progress Legend: ⊖=None ▶=Begun ►=Significant Progress ✓=Done

RESOURCES:

- Reading Room: Federal Register 2006 Tolling Program Options,
- Reason Foundation Annual Privatization Report
- TRB Committee Breakout Prelim: "HOV and Transit Roles"

Action B1: Establish an ongoing communication forum to increase coordination, lessons learned, and eventual decision-making as needed

ACTIVITY:

- Internally organize advisory/implementation team (Done)
- Explore and develop project Communication Plan (done)
- Acquire technical ability to implement Forum communication given resource constraints (Webinar account and training done)
- Participate in local project discussions
- Participate in CTOC meetings
- TBD

ISSUE:

- The CTOC is the perfect collection of people for a statewide dialog, however CTOC is a very loosely formed committee, is not formal, and may not be easily developed into a larger-scale dialog without impetus. How can we create a formal government advisory group?

FUTURE TASK:

- Establish Forum meeting schedule and format
- Hold meetings
- Further develop purpose and effective format
- Participate in Bay Area Express Lane corridor working groups.
- Reading Room: FHWA "Transit and Congestion Pricing, a Primer"
- TBD

Action B2: Each partner determines and strives to apply needed resources to HOV/Express Lane development, operation, adjustment, enforcement, and outreach

ACTIVITY:

- Preliminary understanding of roles and service expectations through joint operations meetings.
- TBD

FUTURE TASK:

- Determine expectations
- Determine gap between traditional/budgeted services and new extended services

ActionB3: Establish best-practices and Caltrans internal guidance on Joint Operations roles/responsibilities/philosophies

ACTIVITY:

- Researched legal position of tolling hybrid vehicles. The conclusion will be based on congestion. CT legal believes hybrids authorized to enter Carpool lanes without occupancy minimums should be treated at Carpools in Express Lanes as well, until XLane degradation is measured. LA Metro legal reads it differently. At this time, hybrids treated as carpools, however as congestion increases this will be removed.
- Monitored hybrid laws for expiration and discouraged further preferential laws.
- CTOC /CHP joint meeting in October. Issues: Lawfulness of citation for switchable tag
- Bay Area Concept of Operations drafted
- Bay Area Joint Operation Agreement drafted for I-680 (other projects beginning)
- I-10 / I-110 CRDP Los Angeles Concept of Operations (Done)
- I-10 / I-110 CRDP Los Angeles Joint Operation Agreement (Done)
- San Bernardino / Orange County Joint Operations Agreement (Historical)
- I-15 Sandag / Caltrans / CHP JOA (Historical)
- TBD

ISSUES:

- CHP may recommend statute change to create lawfulness of switchable tag citation

FUTURE TASK:

- Learn from existing and new Joint Operations activities through Forum and individual phone calls
- Begin drafting template guidance
- TBD

Action B4: Explore and utilize customer and political concerns

ACTIVITY:

- Regional project teams (Caltrans and Local agencies) conducting public surveys
- Regional project teams experiencing knowledge gap/concerns from local public boards/officials/media
- Participated in Senate Transportation Committee Hearings on HOVs on November 17 and December 1, 2009. Topics were related to performance, reaching goals, future plans and strategies, and hybrid treatment.
- TBD

FUTURE TASK:

- TBD

Action B5: Share and adopt best message material to increase the government's compelling common voice

ACTIVITY:

- Regional project teams (Caltrans and Local agencies) developing outreach materials
- Consultant from 2009 Caltrans Business Plan project conducted preliminary public message analysis and recommendations
- TBD

FUTURE TASK:

- Synthesize variety and develop some common themes, logos, headlines, FAQs, templates
- Utilize 2009 Caltrans Business Plan consultant recommendations
- TBD

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Focus C: Update Technical Policies

- Update HOV Guidelines and other design/operating/approval standards
- Explore and clarify federal guidance and requirements for system changes
- Update State and federal tolling statutes as necessary

Outcome: Updated guidelines and standards address current questions on dual-lane facilities, access control, signage, toll collection and simplify implementation of needed system adjustments. Title-21 and automated occupancy detection technology improvements enable open-road tolling.

KEY ISSUES:

- Update HOV Guidelines for access design, signing, priorities, striping
- Issue TOPD immediately as needed to communicate changes in guideline/standards
- Hybrid tolling policy/practice needs immediate resolution
- Update Title 21 and related tolling Administrative Law

Team Leader: Joseph Rouse, HQ Caltrans, 916-654-6448

ACTION ITEM PROGRESS

Transformation Action Areas		Expected Schedule						
		2009	2010		2011		2012	
C1	Update Caltrans' High-Occupancy Vehicle Guidelines and other design/approval documentation	▶		1		2		3
C2	Explore and clarify federal guidance and requirements for system changes	▶						
C3	Enable open-road tolling with technology and updated statutes/regulations (e.g. Title 21)	▶						
C4	Simplify the process of obtaining tolling authority	⊖						

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RESOURCES:

- Reading Room: Federal Register 2006 Tolling Program Options
- Federal MUTCD new chapter on Express Lane signing and striping

Action C1: Update Caltrans' High-Occupancy Vehicle Guidelines and other design/approval documentation

ACTIVITY:

- Through consultation with district functional managers, determined that much of the documentation of updated policies and practices related to HOV and Express Lane business will be finally reside in the HOV Guidelines. At this time, three phases of update to the Guidelines are envisioned. The Guideline may change names and will gain new chapters.
- Participation in regional PDT meetings.
- More intentional dialog between Ops, HQ, District, Design, regions, CHP.
- HOV Guidelines Update committee kicked off January 2010. This will be major effort ongoing throughout the business Transformation. Committee includes CHP, FHWA, Design, HQ and District Ops. First priority for update actions were decided to be Express Lane access design and signage standards.
- Caltrans Operations & Design developing closer coordination/communication dynamic

Discuss access design guidance (Caltrans Lead)

Discuss/explore striping/signing requirements (Caltrans Lead)

Discuss other operational guidance (Local lead)

- Federal MUTCD issued December 2009 containing Express Lane signing. Caltrans discussing timeline/approach for quick adoption given that no current standard exists in California.
- TBD

ISSUE:

- TBD

FUTURE TASK:

- Reading Room: TRB Committee Breakout 2009 "Safety-Enforcement-Signing
- TBD

Action C2: Explore and clarify federal guidance and requirements for system changes

ACTIVITY:

- Read/interpret existing HOV Operations guidance from FHWA
- Clarifying FHWA requirements on specific projects (Express Lane Signing in MUTCD, operational changes on SR60 in San Bernardino and SR22 in Orange County)

ISSUE:

- TBD

FUTURE TASK:

- FHWA to document more clarified guidance/philosophy of roles and responsibilities during system adaptations.
- TBD

Action C3: Enable open-road tolling with technology and updated statutes/regulations (e.g. Title 21)

ACTIVITY:

- Participate/Observe SANDAG partnership test of vehicle occupancy detection using technology (2009-2010)
- Discuss potential and pitfalls of continuous-access striping and Express Lane tolling violations tradeoff
- Caltrans HQ and CHP increasing participation in CTOC.
- A review of Title 21 revealed that switchable tags are compliant with existing Title 21, and the Read/Write may be allowed (still researching.) Possibly no change is needed to meet needs. Almost done.
- AB 744 (Torrico 2009) proposed and pending approval by Legislature in 2010 session.
- AB798 (Nava 2009) enrolled. Authorizes CA Transportation Financing Authority to oversee transportation funding and removes requirement for CTC to get Legislative concurrence for the 4 authorized HOT projects (historical)
- AB628 (Block 2009) enrolled enabled license-plate based tolling/enforcement
- AB1381 (Perez 2009) enrolled enabling LA CRD project authority
- Utilizing HOV Pooled Fund Study resources nationwide to find further solutions to efficient violation enforcement
- TBD

ISSUE:

- Can the CTFA have a role in Express Lane leadership for the state?
- TBD

FUTURE TASK:

- Possibly request federal tolling authority in regional or statewide basis (rather than route by route)
- Regions request state tolling authority via legislation
- TBD